

ABSTRACT OF THE DISCLOSURE

A microscope for CARS microscopy has means for generating a pump light beam and a Stokes light beam that can be directed coaxially through a microscope optical system onto a sample. A detector detects the detection light proceeding from the sample. The means for generating the pump light beam and the Stokes light beam contain a laser and encompass a microstructured optical element that spectrally broadens the light of the laser.